SCP1802
SCP1802L
Preliminary

8-Bit Single Chip Microprocessor

Silicon Gate CMOS

Features

- 8-Bit Central Processing Unit
- Memory Addressing to 65K Bytes
- CMOS Advantages:
  - Very low power
  - High noise immunity
  - Single power supply
- Compietely Static Operation:
  DC→6.4 MHz (f_{CL})
- Wide Temperature Range
- Single Phase, On-Chip Clock
- Fixed Instruction Execution Time:
  2.5 or 3.75 μsec. @ 10V
- Complete DMA Controls On-Chip
- Bit-Serial Inputs and Output
- Maskable Interrupt
- 8-Bit Bidirectional Data Bus

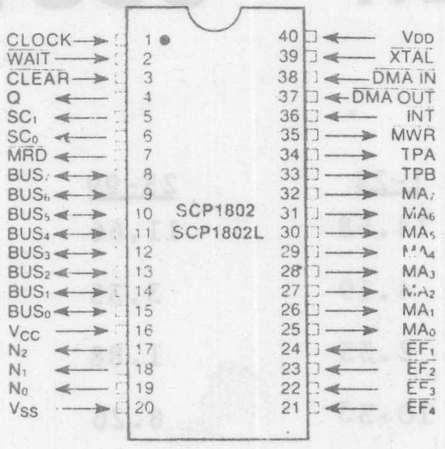
Description

The SCP1802 microprocessor is designed for applications requiring sophisticated, decision-oriented control. The unique arrangement of its internal registers allow a high level of user programmability for optimal system efficiency. Combined with the advantages of CMOS technology, the 1802 is effective in a wide range of uses.

Memory addressing is done via a dedicated 8-bit address bus. The 16-bit memory address is multiplexed, 8-bits at a time; the appropriate strobe, read, and write signals are also provided. Input/output operations are accomplished using the 8-bit, bidirectional data bus as well as 13 other signals. Fourteen specific instructions are dedicated to I/O byte transfers. See the "User Manual for the SCP1802 Microprocessor", SM-801 for programming and other how-to-use information.

The SCP1802 is available in several industry standard 40-pin packages. The SCP1802L and SCP1802 are functionally identical; they differ in their operating voltage range.

Pin Configuration



Suffixes

L	4–6V operating range
no L	4–12V operating range
D	ceramic
E	epoxy
H	chip

Pin Names

BUS_{0-7}	Data Bus
MA_{0-7}	Memory Address Bus
$\overline{EF}_{1-4}$	External Flags
N_{0-2}	N Bits
SC_0, SC_1	State Code Indicators
TPA, TPB	Timing Pulses
$\overline{DMA\ IN}$, $\overline{DMA\ OUT}$	Direct Memory Access Requests
$\overline{CLEAR}$, $\overline{WAIT}$	Mode Control Inputs
CLOCK, XTAL	Timing Inputs
$\overline{MWR}$, $\overline{MRD}$	Memory Write, Read
$\overline{INT}$	Interrupt Request
Q	Bit Serial Output
V_{DD}	Internal CPU Voltage Level
V_{CC}	CPU Interface Voltage Level
V_{SS}	Ground

Typical SCP1802 Microcomputer System